

Amended Claims

1. (Currently Amended) A multipressure plenum system for supporting a conveyor belt of a gas supported belt conveyor, said multipressure plenum system including:
  - a plenum having a support surface including a plurality of apertures and a chamber in fluid communication with said apertures;
  - a first conduit in fluid communication with said chamber of said plenum, said first conduit adapted to supply gas at a first pressure to said chamber;
  - a second conduit in fluid communication with said chamber of said plenum, said second conduit adapted to supply [[a]] gas at a second pressure to said chamber;whereby said first conduit is adapted to supply the gas at said first pressure to said chamber of said plenum such that the gas at said first pressure flows through said apertures to form a gas cushion between the conveyor belt and said support surface of said plenum, and said second conduit is adapted alternatively to supply the gas at said second pressure to said chamber of said plenum such that the gas at said second pressure flows through said apertures in said support surface to form the gas cushion.
2. (Original) The multipressure plenum system of claim 1 including a valve in fluid communication with said first conduit, said valve adapted to prevent the gas at said second pressure as supplied to said chamber of said plenum from flowing out of said first conduit.
3. (Original) The multipressure plenum system of claim 1 including a pressure regulator in fluid communication with said second conduit, said pressure regulator adapted to control the pressure at which the gas at said second pressure is supplied to said chamber of said plenum.
4. (Original) The multipressure plenum system of claim 1 including a valve in fluid communication with said second conduit, said valve adapted to control the flow of gas to said second conduit.

5. (Original) The multipressure plenum system of claim 4 including an accumulator in fluid communication with said second conduit, said accumulator adapted to contain gas at a pressure at least equal to said second pressure.

6. (Currently Amended) A multipressure plenum system for supporting a conveyor belt of a gas supported belt conveyor, said multipressure plenum system including:

a plenum having a support surface including a plurality of apertures and a chamber in fluid communication with said apertures;

a first source of gas at a first pressure, said first source of gas adapted to be placed in fluid communication with said chamber of said plenum;

a second source of gas at a second pressure, said second source of gas adapted to be placed in fluid communication with said chamber of said plenum;

whereby said first source of gas is adapted to supply gas at said first pressure to said chamber of said plenum such that the gas flows through said apertures in said support surface to form a gas cushion between the conveyor belt and said support surface of said plenum, and said second source of gas at said second pressure is adapted alternatively to supply gas at said second pressure to said chamber of said plenum such that said gas at said second pressure flows through said apertures in said support surface and forms the gas cushion that supports the conveyor belt, the gas cushion provided by said second source of gas adapted to support more weight than the gas cushion provided by said first source of gas.

7. (Original) The multipressure plenum system of claim 6 wherein said second pressure of the gas supplied by said second source of gas is greater than the pressure of the gas supplied by said first source of gas at said first pressure.

8. (Original) The multipressure plenum system of claim 6 wherein said first source of gas comprises a blower.

9. (Original) The multipressure plenum system of claim 6 wherein said second

source of gas comprises an air compressor.

10. (Original) The multipressure plenum system of claim 6 wherein said second source of gas comprises an accumulator.

11. (Original) The multipressure plenum system of claim 6 including a valve providing selective fluid communication between said first source of gas and said chamber of said plenum.

12. (Original) The multipressure plenum system of claim 6 including a pressure regulator in fluid communication between said second source of gas and said chamber of said plenum, said pressure regulator adapted to control the pressure at which the gas at said second pressure is provided to said chamber of said plenum.

13. (Original) The multipressure plenum system of claim 6 including a valve providing selective fluid communication between said second source of gas and said chamber of said plenum.

14. (Original) The multipressure plenum system of claim 6 including a second plenum, said second plenum including a support surface having a plurality of apertures and a chamber in fluid communication with said apertures, said first source of gas being in fluid communication with said chamber of said second plenum.

15. (Original) The multipressure plenum system of claim 6 including a pressure relief valve adapted to vent gas within said chamber of said plenum to the atmosphere when the gas within said chamber reaches a selected pressure.

16. (Original) The multipressure plenum system of claim 6 including a pressure switch for sensing when the pressure of the gas within said chamber of said plenum falls below a selected pressure.

17 - 26. (Cancelled)